MEMORANDUM

SUBJECT: Comments on the SLERA for the Barge Doc Facility (AOC4) Falcon Refinery Superfund Site (Ingleside, TX)

FROM: Kenneth Shewmake, USEPA Ecological Risk Assessor

TO: Brian Mueller, USEPA Remedial Project Manager

DATE: April 8, 2014

General Comments:

1. The ecological exclusion screening worksheet (App A) is not used by Superfund in region 6. I believe that this worksheet is from TCEQ guidance. Some people in RCRA may have adapted this form but it has not been used by Superfund. It would be appropriate to leave this worksheet in as an appendix, if it is properly identified as a TCEQ worksheet, as this shows compliance with state regulations. This worksheet cannot be used in an EPA risk assessment to demonstrate lack of habitat or the disturbed nature of the site. The text in the document will need to spell out the reasons for making the determination that the site is disturbed. The text will need to make a strong argument to support this decision.

   Here is a list of things that I look for when evaluating urban and disturbed property. Please address these conditions in the text of the document.

   - Potentially sensitive environmental areas exist on, adjacent to, in proximity to, or within 500 feet of the boundary of the site. Any such area is considered to be in proximity to a site if the area is directly affected by site activities or contaminants, or if receptors utilizing the sensitive environmental area(s) also utilize habitats on-site. A distance of 500 feet was selected because it is reasonable to assume that contaminants can easily migrate over shorter distances.
   - Areas of contiguous undeveloped land exist adjacent to, in proximity to, or within 500 feet of the boundary of the site.
   - "The site is located on, or directly adjacent to, an area where management or land use plans will maintain or restore native or semi-native vegetation (e.g., greenbelts, protected wetlands, forestlands, locally designated environmentally sensitive areas, open space areas managed for wildlife, and some parks or outdoor recreation areas)" Consideration is given to whether site-related contaminants of potential concern (COPCs) or activities affect these areas.
   - Transport pathways exist from the primary source of contamination to areas of contiguous undeveloped land or surface water on-site or in

proximity to the site.

- The site is used by Federal or state listed threatened, endangered or protected species.
- If future land use plans will lead to the restoration of any portion of the site to "natural" conditions, a full ERA must be conducted to determine if proposed future land use will result in risk to ecological receptors.

If none of the above conditions are present in this AOC then we can proceed under the assumption that the property is disturbed and a full baseline ecological risk assessment is not needed. I would encourage EA to fully document any conditions that would strengthen the argument that the AOC is disturbed. In these cases we look for conditions like the ones listed below.

- The site is wholly contained within contiguous land characterized by pavement, buildings, roadways, equipment storage areas, manufacturing of process areas, or other structures or covers, and/or
- There are physical barriers that eliminate exposure of receptors to contaminated media that will not be disturbed by remediation or by the intended future land use and/or
- All COCs present in soil are located deeper than five feet below ground surface, and surface soils will not be removed or disturbed.

If the case has been made that the site is disturbed, then we may be able to assume that chronic exposure is unlikely at this AOC. In this case acute values could be used for evaluating risk to measurement receptors.

2. TCEQ should be consulted regarding the APP A ecological exclusion worksheet.

3. The statements made about steps of the ERA not being necessary due to the Ecological Exclusion Worksheet will need to be removed throughout the document. The statements made about no further ecological evaluation due to disturbed nature will also need to be removed unless additional supporting information is provided in the report. An abbreviated ecological risk assessment using acute values will be needed even for disturbed property. This includes the selection of assessment endpoints, measurement receptors, and identification of pathways to be evaluated. The comparison to acute values should be done with COPECs that remain after screening with max values (COPCs listed on page 10). Acute values should come from EcoSSLs if possible.

4. A comparison to background values should be presented. If no background values are available then a comparison to TX specific soil background concentrations should be presented. The comparison should not be used as a screen, but it can be noted that PRGs will not be needed for COPECs that are below background as EPA does not remediate below background values.

5. Information on the potential for floods and hurricanes in the area should be

provided along with an evaluation of the potential migration of COPCs from this AOC during these events.

6. A discussion of ARARs and any values that exceed ARARs is needed.

7. A discussion of future use is needed. Are any instructional controls in place? What evidence exist the area will remain an industrial area?

8. Page 6, Threatened and endangered species. – This section should discuss the likelihood that T&E species will utilize habitat in, or bordering this AOC. This should be done for each T&E species.

9. Figure 2- Please change the color of the border for AOC4 so it will be clear what is being evaluated. AOC 3 needs to be labeled better. The AOC label is outside area and is confusing.

10. Figure 5, CSM- The primary source of contamination should be shown on the CSM. This would be the historical releases or the other sources of contamination. The soil pathway for plants, soil invertebrates, birds, mammals, and reptiles needs to be evaluated. This should be noted on the CSM. If the habitat evaluation shows presence of food sources then exposure to the terrestrial food chain should be shown as complete and evaluated.

11. Table 3 Ecological screening benchmarks. TCEQ screening benchmarks should be used when available. Several of the chemicals listed show NA when TX screening values are available.

12. Figure 4: If possible, the locations where composite sample FR-133A was collected should be shown or a description of how sample was collected should be added to the figure legend.

13. In addition to table 4, data tables for all sampling data in AOC4 should be included in this document.

14. APP A #3: The nearest water body is redfish bay. The wetland is further away. This should be discussed in the worksheet. The response needs to indicate the distance to the wetland. The response needs to indicate one water body is marine and one is brackish wetland if this is the case.

15. APP A #4: Need to answer the following question in the worksheet. Is migration coming from AOC4 and migrating to redfish bay or the wetland?

16. APP a Sub part B, #1: The AOC is bordered by an industrial dock area on one side; the remaining land bordering the site appears to be compacted soil, gravel, and pavement.